

# PATENT ABSTRACTS OF JAPAN

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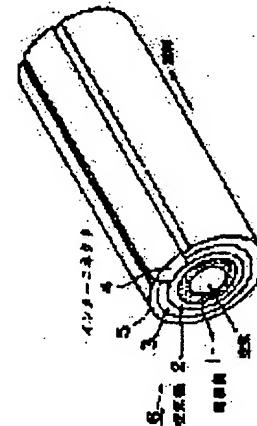
(21) Application number : 03-011627 (71) Applicant : CENTRAL RES INST OF ELECTRIC  
 POWER IND  
 (22) Date of filing : 09.01.1991 (72) Inventor : MORI MASASHI  
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**(54) MANUFACTURE OF INTERCONNECTOR OF LATERAL-STRIPED CYLINDRICAL SOLID ELECTROLYTE FUEL CELL**

**(57) Abstract:**

**PURPOSE:** To manufacture a connector of a lateral-striped cylindrical solid electrolyte fuel cell with lanthanum chromite, and to manufacture it at a low cost, in a short time, and in a simple way.

**CONSTITUTION:** A powder of a specific mixing ratio of lanthanum calcium chromite  $La_{1-x}Ca_xCr_{1-y}O_3$  in which  $0 < x \leq 0.40$  and  $y \leq x$  is made into a slurry, and coated on an air electrode 2 and baked, so as to form an interconnector 4.



**LEGAL STATUS**

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TITLE: Interconnector prodn. for wrap streak solid-state electrolytic fuel cell - comprises pulverising composite oxide of lanthanum, calcium and chromium to form slurry, coating on air pole and sintering

PATENT-ASSIGNEE:

ASSIGNEE	CODE
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PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 04248272 A	September 3, 1992		004	H01M008/02
JP 3224822 B2	November 5, 2001		004	H01M008/02

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ABSTRACTED-PUB-NO: JP 04248272A

BASIC-ABSTRACT:

Connector  $La(1-x)CaCr_1-yO_3$  of component molecule ratio  $La:Ca:Cr = (1-x):X:(1-y)$  where  $x$  is more than 0 and up to 0.4,  $y$  is more than 0 and up to 0.05 and  $y$  is up to  $x$ . Oxide is pulverised to a slurry, which is coated on an air pole and sintered.

ADVANTAGE - The connector is produced at lower cost in a short time, since it is sintered at lower temp.

In an example, a mixt. of 401g of lanthanum nitrate, 100 g of calcium nitrate and chromium nitrate was dissolved in 529 g distilled water, dripped in an ethanol soln. contg. excess oxalic acid, dried by cool air, heated to 360 deg.C for 5 hours, ball milled, sintered for 10 hours at 1000 deg.C, mixed with 300-400 l solvents and 48-53 polyvinyl alcohol etc. to form a slurry. A fuel cell was prep'd. by an air pole (2) of lanthanum manganite adhered on a porous substrate tube (1), sintered for 5 hours at 1300 deg.C in air. The slurry was coated on it in an axial direction with required width on (2), sintered for 5 hours at 1300 deg.C in air to form inter connector film (4). Lanthanum chromite powder was adhered on it for masking, a zirconia electrolyte film (3) was formed on it by EVD method, a fuel pole (5) of Ni-zirconia thermet was coated on it to form a fuel cell.

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CHOSEN-DRAWING: Dwg.1/1

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TITLE-TERMS: INTERCONNECT PRODUCE WRAP STREAK SOLID STATE ELECTROLYTIC FUEL CELL  
COMPRIZE PULVERISE COMPOSITE OXIDE LANTHANUM CALCIUM CHROMIUM FORM SLURRY COATING  
AIR POLE SINTER

DERWENT-CLASS: A81 L03 X16

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